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NEW DATA ON THE TRIBE NEONEURINI (HYMENOPTERA: BRACONIDAE: EUPHORINAE) OF RUSSIA

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Summary. A new data on the distribution of braconid parasitoids from the euphorine tribe Neoneurini (Braconidae: Euphorinae) in the fauna of Russia is provided. The genus *Kollasmosoma* van Achterberg et Argaman, 1993 with new species *K. austrorossicum* **sp. n.** is recorded from the fauna of Russia for the first time. Two species of the genus *Elasmosoma* Ruthe, 1858 are newly recorded from Russia: *E. lindae* Huddleston, 1976 (Republic of Altai and Tuva) and *E. pergandei* Ashmead, 1895 (Republic of Kalmykia).

Key words: Braconidae, Euphorinae, parasitoid of ant adults, new species, new records, Kalmykia, Altai, Tuva.

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Резюме. Приведены новые данные о распространении браконид трибы Neoneurini (Braconidae: Euphorinae) в фауне России. Род *Kollasmosoma* van Achterberg et Argaman, 1993 с новым видом *K. austrorossicum* **sp. n.** впервые обнаружен на территории России. Впервые для России также указываются 2

вида из рода *Elasmosoma* Ruthe, 1858: *E. lindae* Huddleston, 1976 (республики Алтай и Тува) и *E. pergandei* Ashmead, 1895 (Республика Калмыкия).

INTRODUCTION

The tribe Neoneurini Bengtsson, 1918 is one of the most peculiar taxa in the subfamily Euphorinae. The members of this tribe are known as parasitoids of the ant adults mainly from the genus *Formica* Linnaeus, 1758 (Tobias, 1966; Huddleston, 1976; Tobias & Yuldashev, 1979; van Achterberg & Argaman, 1993; He *et al.*, 1997; van Achterberg & Koponen, 2003; Gómez Durán & van Achterberg, 2011; Stigenberg *et al.*, 2015; Yu *et al.*, 2016). The tribe includes six recent genera, *Elasmosoma* Ruthe, 1858; *Euneoneurus* Tobias et Yuldashev, 1979; *Kollasmosoma* van Achterberg et Argaman, 1993; *Neoneurus* Haliday, 1838; *Parelasmosoma* Tobias et Yuldashev, 1979; *Sinoneoneurus* He, Chen et van Achterberg, 1997, and one fossil, *Elasmosomites* Brues, 1933.

Currently only two genera were recorded from Russia, *Elasmosoma* [with *E. berolinense* Ruthe, 1858 and *E. luxemburgense* Wasmann, 1909] and *Neoneurus* [with *N. auctus* (Thomson, 1895) and *N. clypeatus* (Foerster, 1863)].

Recent collecting of material in the southern regions of Russia gave a new interesting findings including discovery of new taxa from the tribe Neoneurini. South Palaearctic genus *Kollasmosoma* with a new species was collected in Russia (Kalmykia) for the first time, as well as two *Elasmosoma* species, *E. lindae* Huddleston, 1976 (Altai and Tuva) and *E. pergandei* Ashmead, 1895 (Kalmykia).

DESCRIPTION OF NEW SPECIES

Genus *Kollasmosoma* van Achterberg et Argaman, 1993

Kollasmosoma van Achterberg et Argaman, 1993: 66.

Type species: *Elasmosoma platamonense* Huddleston, 1976, by original designation.

REMARKS. This is small genus with four known species very closely related to *Elasmosoma* Ruthe, 1858 and mainly distributed in the south-west of the Palaearctic region (south Europe, Israel, Egypt, Kazakhstan) and Mongolia. A new species of this genus was discovery in the southern region of the European part of Russia.

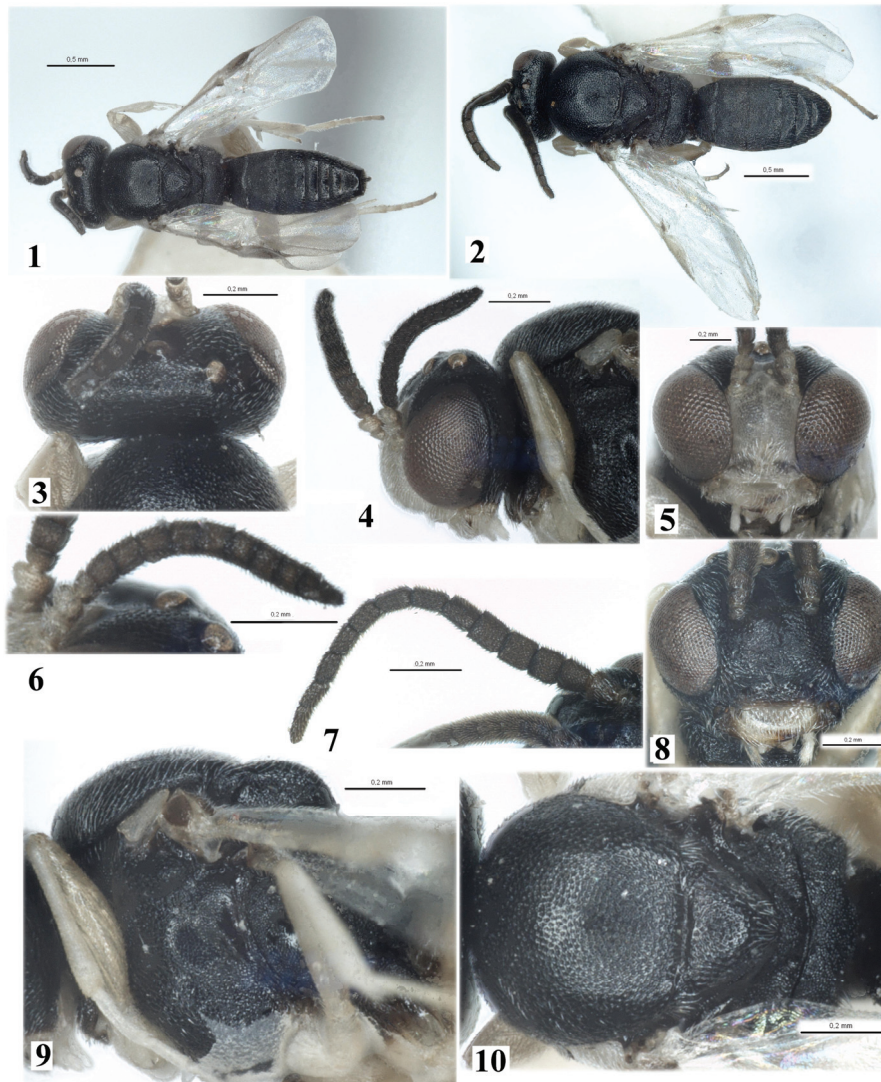
***Kollasmosoma austrorossicum* Belokobylskij, sp. n.**

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Figs 1–18

TYPE MATERIAL. Holotype: female, **Russia**: Kalmykia, 6 km SW of Komsomolskiy Settlement, 45°18'N, 45°58'E, sands, 18.VII 2015, S. Belokobylskij (ZISP). Paratypes: 2 females (1 female partly broken), Kalmykia, 23 km SEE of Khulkhuty, Davsna Sands, 46°17'N, 46°40'E, 15–16.VII 2015, S. Belokobylskij (ZISP); 1 male, Kalmykia, 17 km SWW of Artezian, Kuma River, 44°56'N, 46°27'E, 19–21.VII 2015, S. Belokobylskij (ZISP).

COMPARATIVE DIAGNOSIS. A new species is similar to *K. sentum* van Achterberg et Gómez, 2011 from Spain by having the process on the fifth metasomal sternite of female, but differs from it the shape of metasomal process (it is apically wide and obtuse, but narrow and acuminate in *K. sentum*), scape longer than pedicel



Figs 1–10. *Kollasmosoma austrorossicum* sp. n. (1, 3–6, 9, 10 – female, holotype; 2, 7, 8 – male, paratype). 1, 2 – habitus, dorsal view; 3 – head, dorsal view; 4 – head and antennae, lateral view; 5, 8 – head, front view; 6, 7 – antenna; 9 – mesosoma, lateral view; 10 – mesosoma, dorsal view.

(shorter in *K. sentum*), pedicel round in lateral view (trapezoid in *K. sentum*), and apical segment of antenna depressed (not depressed in *K. sentum*).

Also *K. austrorossicum* sp. n. similar to *K. marikovskii* (Tobias, 1986) from Kazakhstan by scape longer than pedicel, but differs from it in having the third antennal segment shorter than fourth segment (somewhat longer in *K. marikovskii*), fore tarsus distinctly longer than middle tarsus (shorter in *K. marikovskii*), frons and vertex densely rugulose-punctate with granulation (transversely striate in *K. marikovskii*), face of female white (black in *K. marikovskii*), and obtuse process on the fifth metasomal sternite of female present (absent in *K. marikovskii*).

DESCRIPTION. Female. Length of body 2.3–2.6 mm, of fore wing 1.6–1.8 mm.

Head. Head width 1.8–2.0 times its median length, 1.2–1.3 times width of mesoscutum (without tegulae). Head (dorsal view) distinctly and evenly roundly narrowed behind eyes; transverse diameter of eye 1.8–2.2 times temple length. Ocelli weakly enlarged, arranged in very obtuse triangle with base 1.5–1.6 times its sides. POL 3.4–3.7 times OD, 2.7–2.8 times OOL. Frons convex anteriorly and medially, but weakly concave postero-laterally. Eye without setae, 1.4 times as high as broad, below narrowed to each other. Malar space very short, 0.03–0.07 times eye height, 0.15–0.30 times basal width of mandible. Face strongly convex, without facial tubercles and bristles, its width 0.45–0.50 times eye height, about 0.8 times height of face. Clypeus weakly convex, wide, its width 4.0 times maximum height, 1.2–1.3 times width of face, weakly concave on lower median margin. Head lower eyes distinctly and almost linearly narrowed. Maxillary palps short and thickened.

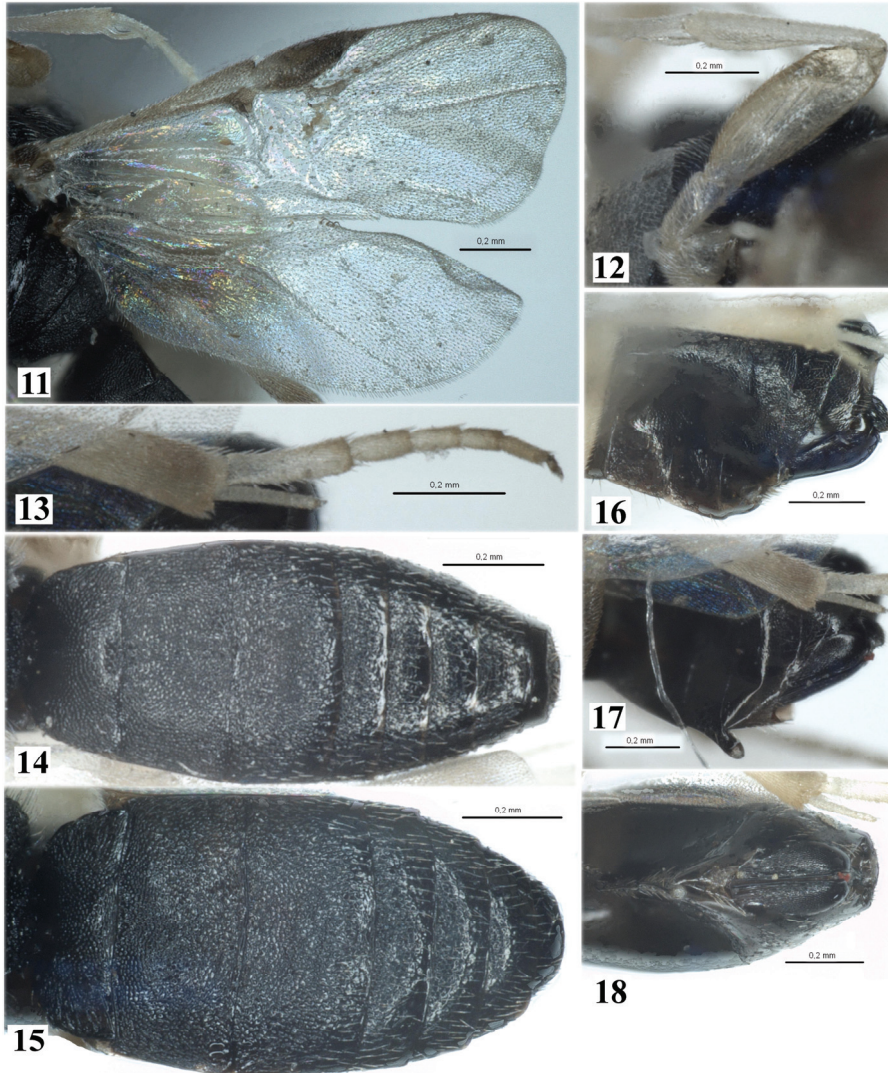
Antenna. Antenna thickened, 12-segmented, apical segment longest and depressed. Scape (without radix) 1.20–1.25 times longer than pedicel. Length of third segment of antenna 0.7–0.8 times its maximum width, 0.8–1.0 times length of pedicel, 0.8 times fourth segment, which are 0.80–0.85 times as long as maximum width. Length of penultimate segments almost equal to their width, 0.5–0.6 times length of obtuse apical segment.

Mesosoma. Length of mesosoma 1.15–1.20 times its height. Mesoscutum 1.2 times wider than median length. Prescutellar depression (scutal sulcus) very narrow, finely and densely crenulate. Scutellum distinctly convex. Sternaulus (precoxal sulcus) absent. Mesosternal sulcus very narrow and microcrenulate. Metanotum (dorsal view) widely convex medially, without carinae, 0.4 times as long as scutellum. Dorsal surface of propodeum much shorter than its posterior surface, without carinae and medial areola.

Wings. Fore wing (Fig. 11) pterostigma wide, 2.6–2.8 times longer than its maximum width. Metacarp very short and sclerotised. Radial vein (r and SR) rather wide and sclerotised basally, narrow subhyaline and curved apically, finely pigmented. Basal half of fore wing membrane less densely setose than its distal half. Hind wing membrane sparsely setose basally, with three hamuli.

Legs. Fore coxa weakly convex ventrally. Fore femur wide in lateral view, 2.9–3.5 times longer than wide, moderately curved in dorsal view, weakly compressed and apically without tooth. Fore tibia without protuberances, strongly widened towards apex, its length 4.8–5.2 times maximum width in lateral view, with weakly separated

and weakly elongated lower margin. Fore tarsus 1.3–1.6 times longer than fore tibia and 1.4–1.8 times longer than middle tarsus. Fore tibial spur slightly curved, 0.6–0.7 times as long as fore basitarsus and 0.3 times as long as fore tibia. Hind coxa dorsally



Figs 11–18. *Kollasmosoma austrorossicum* sp. n. (11–14, 17, 18 – female, holotype; 15 – male, paratype; 16 – female, paratype). 11 – wings; 12 – fore femur and tibia, front view; 13 – apex of hind tibia, spur and hind tarsus, lateral view; 14, 15 – mesosoma, dorsal view; 16, 17 – apex of metasoma, lateral view; 18 – apex of metasoma, hypopygium and ovipositor sheaths, ventral view.

distinctly concave in distal half. Hind femur wide, 2.6–3.0 times longer than its maximum width. Hind tibia distinctly widened towards apex, 1.1–1.2 times longer than femur, 0.7 times as long as hind tarsus. Spurs of hind tibia acute apically, inner spur 0.7 times as long as hind basitarsus. Hind tarsus thickened basally and evenly narrowed towards apex. All tarsal claws slender and simple.

Metasoma 1.1–1.3 times longer than mesosoma. First tergite strongly and roundly widened towards apex, weakly convex laterally, with spiracular tubercles. Apical width of first tergite 2.3–2.8 times its minimum basal width, length 0.65–0.75 times its apical width. Suture between second and third tergites distinct. Second tergite 0.5–0.6 times as long as its basal width, almost as long as third tergite. Fifth sternite with rather long and rounded apically process (lateral view), but sometimes it not distanced from sternite. Second tergite with sharp lateral crease. Hypopygium simple, mainly glabrous, with distinct excavation in posterior margin. Ovipositor sheath short, rather wide, rounded apically.

Sculpture and pubescence. Vertex densely punctate-areolate, densely granulate in ocellar triangle, aciculate laterally, with coarse transverse striae in posterior third. Face densely and finely punctate. Mesoscutum and scutellum very densely and evenly punctate, without distinct granulation, scutellum with fine rugosity basally. Mesopleuron densely reticulate-punctate, rugulose-punctate anteriorly. Propodeum without delineated areas, without striation or rugosity, entirely densely distinctly areolate-punctate. First metasomal tergite densely and rather finely reticulate-areolate, second and third tergites entirely, and fourth-seventh tergites in basal halves. One- or two-thirds densely reticulate-areolate, fourth-seventh tergites smooth on apical parts. Face and mesoscutum entirely in dense adpressed setae. Metasoma entirely in rather dense short adpressed white setae. Ovipositor sheath with numerous dense pale short setae.

Colour. Body mainly black; frons antero-medially, face, clypeus, labrum, malar space, mandibles, palps, tegulae and all legs white to yellowish-white; scape and pedicel yellowish-white or pale brown; hind tibia in apico-dorsal one-fifths and hind tarsus dorsally infuscate, hind coxa distinctly infuscate in basal quarter. Wings whitish-hyaline; metacarp and basal quarter or middle of pterostigma white, most part of pterostigma brown to dark brown; most part of veins transparent or subhyaline.

Male. Length of body 2.5 mm, of fore wing 1.8 mm. Head width 2.2 times its median length, almost equal to width of mesoscutum. Transverse diameter of eye (dorsal view) 2.0 times temple length. Ocelli arranged in triangle with base 1.7 times its sides. POL 4.0 times OD. Eye 1.45 times as high as broad, below widely separated to each other. Malar space large, 0.14 times eye height, 0.4 times basal width of mandible. Face width 0.9 times eye height, 1.6 times height of face. Clypeus width 0.85 times width of face. Antenna thickened, 14-segmented, in dense and erect dark setae, its flagellar segments weakly depressed. Scape 1.25 times longer than pedicel. Length of third segment of antenna 0.9 times its maximum width, 1.5 times length of pedicel, equal to fourth segment, which are 0.9 times as long as maximum width. Length of penultimate segments 1.75 times their width, 0.8 times length of apical segment. Length of mesosoma 1.3 times its height. Sternaulus (precoxal sulcus) indistinct. Fore wing pterostigma 2.2 times longer than its maximum width. Base of wing partly

glabrous. Fore femur narrow in lateral view, 3.9 times longer than wide. Fore tibia length 4.5 times its maximum width in lateral view. Hind femur 3.3 times longer than maximum width. Hind tibia 0.9 times as long as hind tarsus. Metasoma almost equal to mesosoma. Apical width of first tergite 3.2 times its minimum basal width, length 0.5 times its apical width. Second tergite 0.5 times as long as basal width.

Sculpture and pubescence. Vertex without granulation in ocellar triangle, aciculation laterally indistinct. Face dense punctate-rugulose. Mesoscutum medio-posteriorly reticulate-rugulose. Mesopleuron below reticulate-rugulose.

Colour. Body mainly black; frons, face and clypeus black; labrum, mandibles widely medially and palps white; antenna entirely dark brown to black; tegula dark brown with wide yellow margin. Fore and middle legs yellow to whitish-yellow; hind coxa mainly black, hind femur brown, hind tibia in apical half brownish-yellow. Pterostigma yellow to brownish-yellow.

Otherwise similar to female.

ETYMOLOGY. From “austrus” (Latin for “south”), and “rossicus” (Russia), because species was collected in the south of the European part of Russia.

REMARKS. The two other known female of this new species are without distanced obtuse process on fifth sternite, because it is perhaps mobile and can situated to press to the middle lower margin of sternite!

NEW RECORDS

Genus *Elasmosoma* Ruthe, 1858

Type species: *Elasmosoma berolinense* Ruthe, 1858.

Elasmosoma lindae Huddleston, 1976

Figs 19–25

MATERIAL EXAMINED. **Russia:** *Republic of Altai:* 10 km SW of Kuray, Kurayskaya Steppe, steppe, dry meadow, 11.VII 2007, 2 ♀, 2 ♂ (S. Belokobylskij leg.). *Republic of Tuva (Tyva):* environs of Uvs-Nur Lake, steppe, flowers, 50°39'58"N, 93°04'36"E, 23–24.VII 2009, 2 ♀, 5 ♂ (S. Belokobylskij leg.); Tore-Khol Lake, 20 km S of Erzin, sands, 50°04'53"N 95°09'04"E, 27–28.VII 2009, 1 ♀ (S. Belokobylskij leg.).

DISTRIBUTION. *Russia: Western Siberia (Altai), Eastern Siberia (Tuva). – Mongolia.

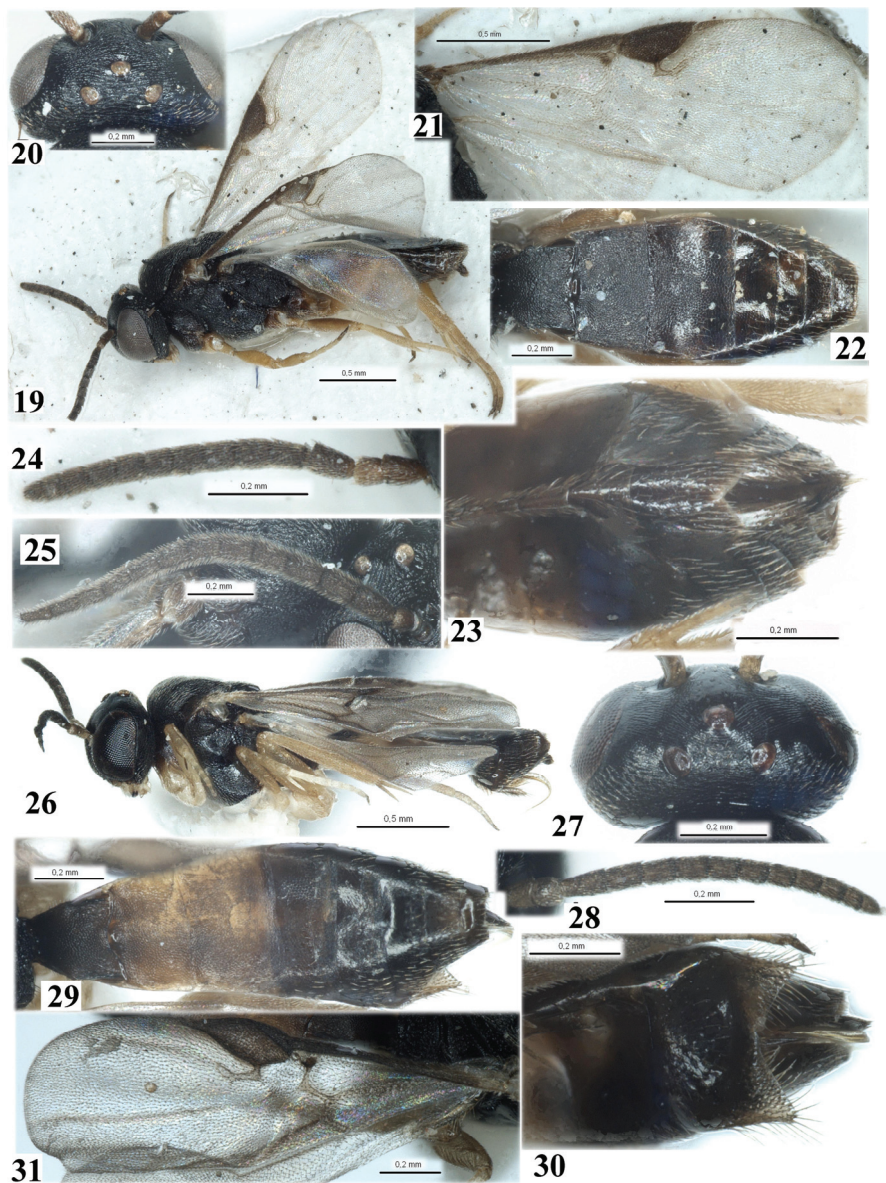
REMARK. The male of this species has the antennae thicker and longer (Fig. 25), with 14 segments and the vertex and frons are coarsely and distinctly striate.

Elasmosoma pergandei Ashmead, 1895

Figs 26–31

MATERIAL EXAMINED. **Russia:** *Republic of Kalmykia:* 22 km E of Yashkul, N 46°09' E 45°39', at light, 16–17.VII 2015, 3 ♀ (V. Loktionov & M. Proshchalykin leg.); same locality, dry steppe, trees, 16–17.VII 2015, 1 ♀ (S. Belokobylskij leg.).

DISTRIBUTION. *Russia: south of the European part (Kalmykia). – Tajikistan, Mongolia; North America.



Figs 19–31. *Elasmosoma lindae* Huddleston (19–24 – female; 25 – male) and *E. pergandei* Ashmead (26–31 – female). 19, 26 – habitus, lateral view; 20, 27 – head, dorsal view; 21, 31 – fore wing; 22, 29 – metasoma, dorsal view; 23, 30 – apical half of metasoma, hypopygium and ovipositor sheaths, ventral view; 24, 25, 28 – antenna.

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